

IN THE CLAIMS

1-43 (Cancelled).

44. (New) A method for fabricating a scanning probe microscope probe, comprising:

forming a structural layer on a substrate,

wherein the substrate forms a cavity, and a sacrificial layer is located between the substrate and the structural layer.

45. (New) The method of claim 44 further comprising selectively removing the sacrificial layer.

46. (New) The method of claim 45 further comprising releasing the structural layer from the substrate.

47. (New) The method of claim 46, wherein the structural layer forms a probe having a tip and a cantilever beam connected with the tip.

48. (New) The method of claim 44, wherein the cavity forms a pyramid.

49. (New) The method of claim 44, wherein the cavity forms a bottom, and the bottom is generally flat.

50. (New) The method of claim 44, wherein the structural layer includes a tip layer in the cavity and a beam layer on the tip layer.

51. (New) The method of claim 50, wherein the tip layer comprises an elastomer.

52. (New) The method of claim 50, wherein the tip layer comprises a first material and the beam layer comprises a second material, wherein the first material is different from the second material.

53. (New) The method of claim 44, wherein the sacrificial layer comprises one of a metal, an oxide, and a polymer.

54. (New) A method for fabricating a scanning probe microscope probe, comprising:

forming a structural layer on a substrate, the structural layer having a tip layer and a beam layer,

wherein the substrate forms a cavity, the tip layer is in the cavity, the beam layer is on the tip layer, and a sacrificial layer is located between the substrate and the tip layer; and

patterning the structural layer.

55. (New) The method of claim 54, wherein the sacrificial layer is located between the substrate and the beam layer.

56. (New) The method of claim 55, wherein the tip layer comprises one of a metal, an oxide, and a polymer.

57. (New) The method of claim 54 further comprising forming an adhesion island on the structural layer.

58. (New) The method of claim 57 further comprising placing a handle on the adhesion island.

59. (New) The method of claim 58, wherein the adhesion island is bonded with the handle and the structural layer.

60. (New) The method of claim 54 further comprising releasing the structural layer from the substrate.

61. (New) A scanning probe microscope probe formed by the method of claim 44.

62. (New) A scanning probe microscope probe formed by the method of claim 54.
63. (New) The method of claim 54 further comprising sharpening the tip.
64. (New) A scanning probe microscope probe comprising:
a tip comprising a first material;
a cantilever beam connected with the tip, the cantilever beam comprising a second material,
wherein the first material comprises one of a metal, an oxide, and a polymer, and the second material comprises one of a metal, an oxide, and a polymer.
65. (New) The scanning probe microscope probe of claim 64, wherein the tip has a height of between 1 and 10 microns.
66. (New) The scanning probe microscope probe of claim 64, wherein the cantilever beam has a length of between 100 and 1000 microns.
67. (New) The scanning probe microscope probe of claim 64 further comprising an adhesion island connected with the cantilever.
68. (New) The scanning probe microscope probe of claim 67 further comprising a handle connected with the adhesion island.